1 Cairo Governorate

Near City Educational Zone
St.Fatima Language School

Answer the following questions :

1 Choose the correct answer :

1 If $\angle X \equiv \angle Y$ and $\angle X$, $\angle Y$ are supplementary angles , then m ($\angle X$) = ...

(a) 45° (b) 90° (c) 135° (d) 180°

2 If two straight lines are perpendicular to a third , then the two straight lines are .....

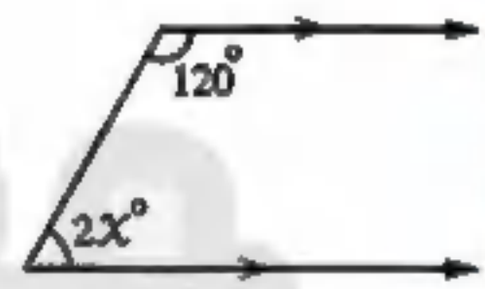
(a) perpendicular. (b) parallel. (c) intersecting. (d) congruent.

3 If $\Delta ABC \equiv \Delta XYZ$, m ($\angle A$) + m ($\angle B$) = 100° , then m ($\angle Z$) = ...

(a) 90° (b) 100° (c) 50° (d) 80°

4 **From the opposite figure :**

x = ...



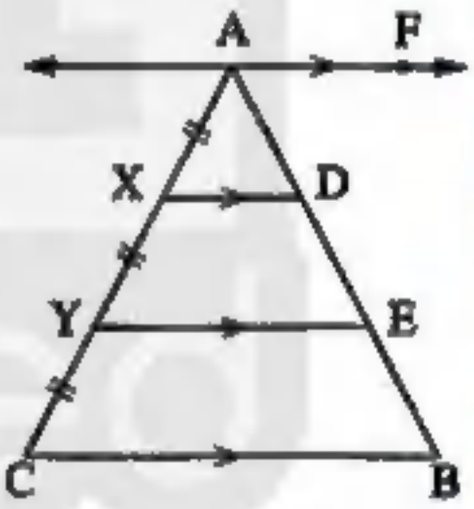
(a) 60° (b) 140°

(c) 30° (d) 180°

5 **In the opposite figure :**

$\overleftrightarrow{AF} // \overline{XD} // \overline{YE} // \overline{CB}$

, AX = XY = YC , then AD : AB = ...



(a) 1 : 1 (b) 1 : 2 (c) 1 : 3

6 If $\Delta ABC \equiv \Delta LMN$, then m ($\angle ACB$) = m ($\angle$ .....)

(a) LMN (b) MLN (c) LNM (d) NLM

2 Complete :

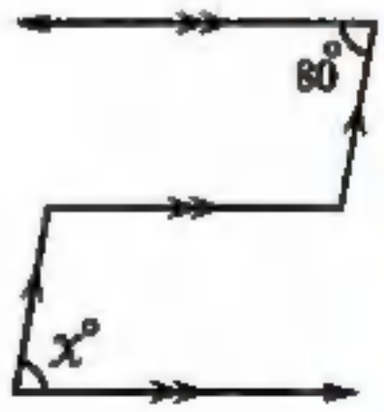
1 If the ratio between the measures of two adjacent supplementary angles is 1 : 2 , then the measure of the largest angle is .....°

2 If m ($\angle A$) = 120° , then m (reflex $\angle A$) = ...°

3 Two triangles are congruent if each side of .....

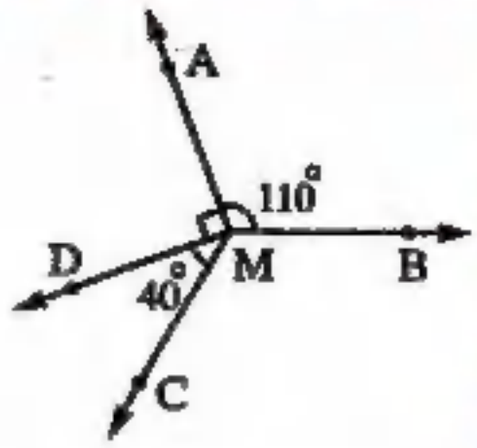
4 **From the opposite figure :**

x = ...°



5 From the opposite figure :

m (∠ BMC) = ...°



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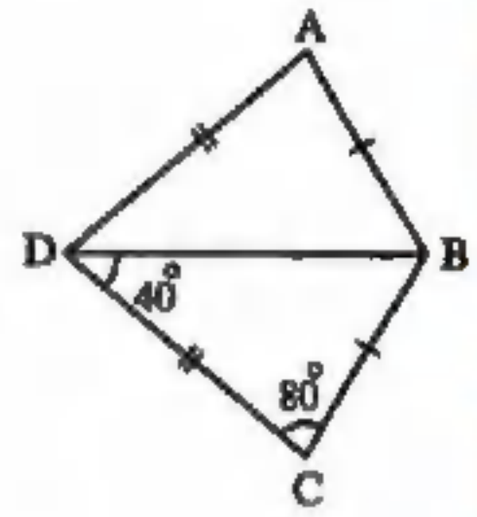
3 [a] In the opposite figure :

AB = BC , AD = CD

, m (∠ C) = 80°

, m (∠ BDC) = 40°

Prove that : Δ CBD ≡ Δ ABD and find : m (∠ ABD)

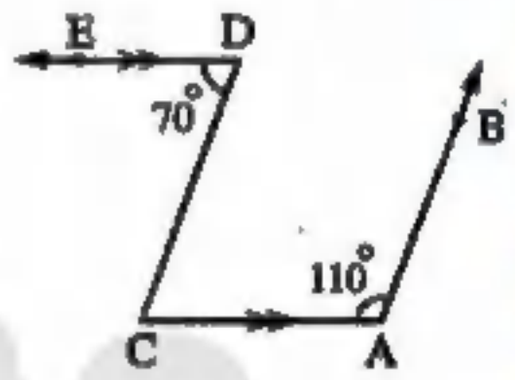


[b] In the opposite figure :

$\overrightarrow{DE}$ // $\overline{AC}$, m (∠ A) = 110°

, m (∠ D) = 70°

Prove that : $\overrightarrow{AB}$ // $\overline{CD}$



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4 [a] In each of the following figures , find the value of X and give reason to your answer :

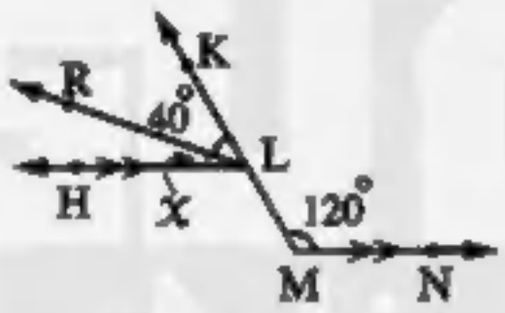

Fig. (1)

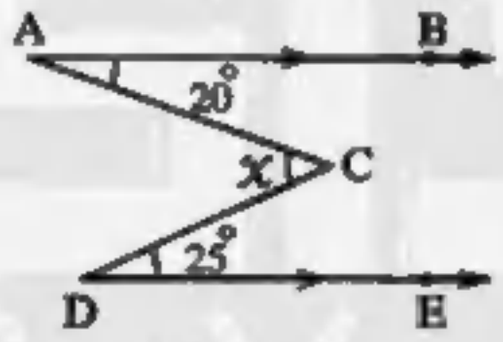

Fig. (2)

[b] Draw any acute-angled triangle , construct the perpendicular bisector of each side.

Do the perpendicular bisectors intersect at one point ?

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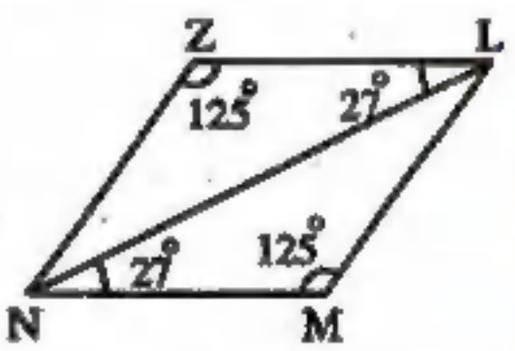
5 [a] From the opposite figure :

Prove that :

The two triangles LMN and NZL are congruent

, then find : m (∠ LNZ)



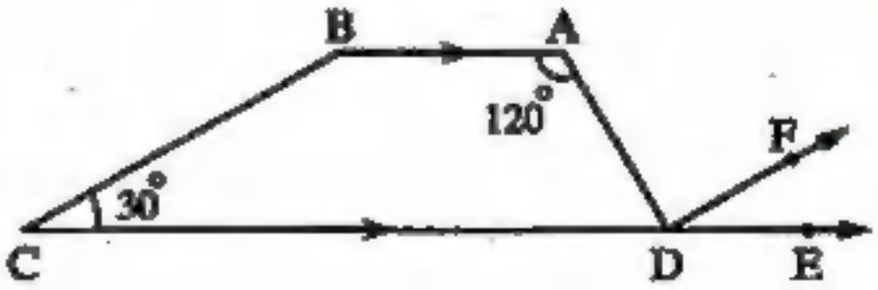
[b] In the opposite figure :

$\overline{AB}$ // $\overrightarrow{CE}$, m (∠ BAD) = 120°

, m (∠ BCD) = 30°

, m (∠ BAD) is four times m (∠ FDE)

Prove that : $\overrightarrow{DF}$ // $\overline{BC}$ and $\overrightarrow{DF}$ ⊥ $\overline{AD}$



2 Cairo Governorate

El-Zaitoun Educational Zone
El-Ma'aref Modern Language School

Answer the following questions :

1 Choose the correct answer :

[1] If two straight lines are perpendicular to a third , then the two straight lines are .....

(a) perpendicular. (b) parallel. (c) congruent. (d) intersecting.

[2] If $\Delta ABC \equiv \Delta XYZ$, $m(\angle A) + m(\angle B) = 100°$, then $m(\angle Z) =$ .....

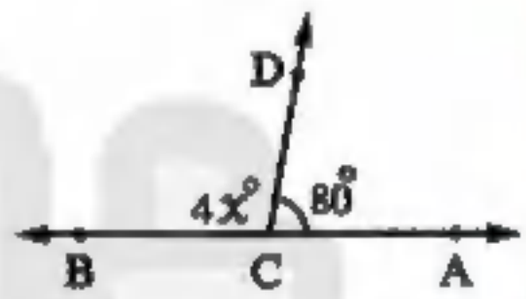
(a) 50° (b) 90° (c) 80° (d) 100°

[3] The image of the point (– 3 , 5) by translation of 3 units in the negative direction of the y-axis is .....

(a) (– 3 , 2) (b) (– 3 , 8) (c) (– 6 , 5) (d) (0 , 8)

[4] **In the opposite figure :**

$\overleftrightarrow{BA} \cap \overrightarrow{CD} = \{C\}$, $m(\angle DCA) = 80°$, then $x =$ .....



(a) 20° (b) 25° (c) 30° (d) 100°

[5] If $\Delta ABC \equiv \Delta XYZ$, $m(\angle A) = 50°$, $m(\angle Y) = 60°$, then $m(\angle C) =$ .....

(a) 50° (b) 60° (c) 70° (d) 80°

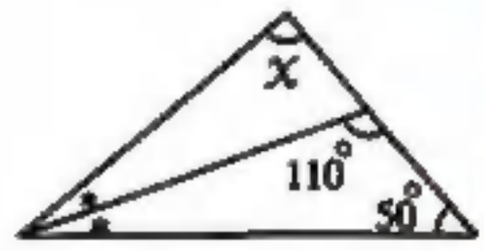
[6] The measure of the supplement of the angle whose measure is 30° equals .....

(a) 60° (b) 180° (c) 90° (d) 150°

2 Complete the following :

[1] If a straight line intersects two parallel straight lines , then each two corresponding angles are .....

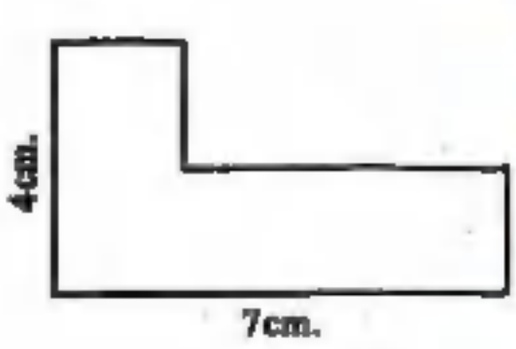
[2] **In the opposite figure :**



$x =$ .....

[3] If $\angle X$ complements $\angle Y$ and $\angle X \equiv \angle Y$, then $m(\angle X) =$ .....°

[4] The perimeter of the opposite figure is ..... cm.

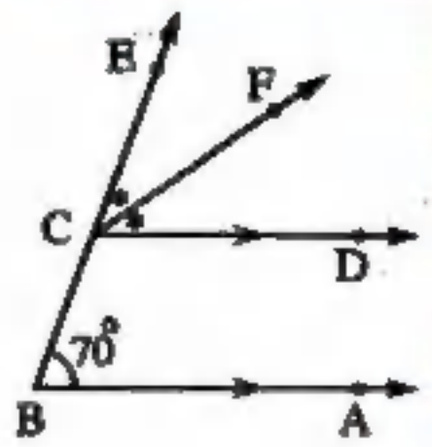


[5] The two right-angled triangles are congruent if .....

3 **[a] From the opposite figure , find :**

m (∠ ECF)

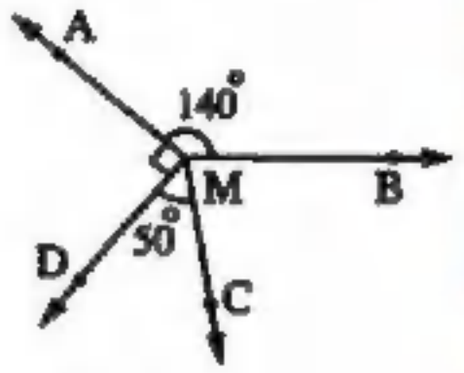
Give the reason.



[b] From the opposite figure , find :

m (∠ BMC)

With steps.

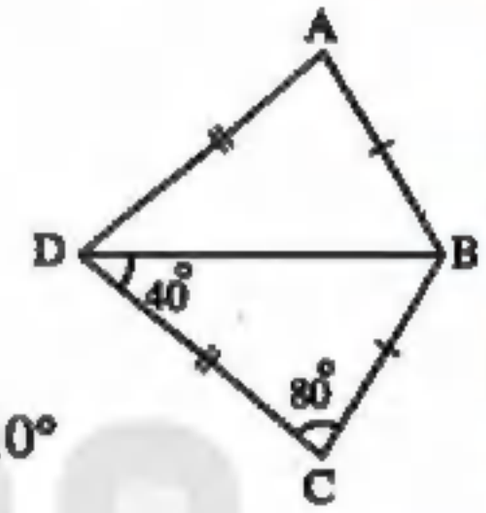


4 **[a] In the opposite figure :**

AB = BC , AD = CD , m (∠ C) = 80° , m (∠ BDC) = 40°

1 **Prove that :** Δ CBD ≡ Δ ABD

2 **Find :** m (∠ ABD)

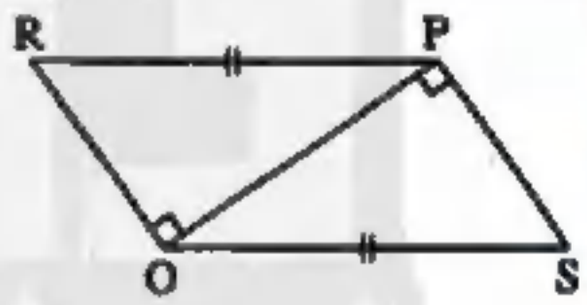


[b] By using your geometric instruments , draw ∠ ABC of measure 110° , then draw $\overrightarrow{BF}$ to bisect the angle.

5 **[a] From the opposite figure :**

Prove that : 1 Δ ROP ≡ Δ SPO

2 m (∠ RPS) = m (∠ SOR)

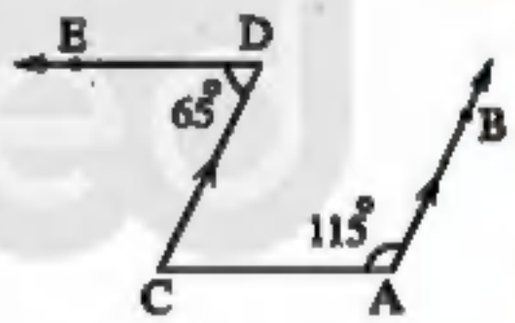


[b] In the opposite figure :

If $\overrightarrow{AB}$ // $\overrightarrow{CD}$, m (∠ D) = 65° , m (∠ A) = 115°

, then prove that :

$\overrightarrow{AC}$ // $\overrightarrow{DE}$



Answer the following questions :

1 **Choose the correct answer :**

1 If ∠ X complements ∠ Y and ∠ X ≡ ∠ Y , then m (∠ X) = ...

(a) 45° (b) 90° (c) 180° (d) 360°

2 If Δ ABC ≡ Δ XYZ , m (∠ A) + m (∠ B) = 100° , then m (∠ Z) = ...

(a) 50° (b) 80° (c) 90° (d) 100°

3 If two straight lines are perpendicular to a third , then the two straight lines are .....

(a) perpendicular. (b) parallel. (c) congruent. (d) intersecting.

4 The sum of the measures of the accumulative angles at a point is .....

(a) 630° (b) 180° (c) 90° (d) 360°

5 The measure of the supplement of the angle whose measure is 30° equals .....

(a) 60° (b) 180° (c) 150° (d) 90°

6 The angle whose measure is more than 90° and less than 180° is ..... angle.

(a) an obtuse (b) an acute (c) a right (d) a straight

2 Complete the following :

1 The two triangles are congruent if two sides and ..... are congruent with the corresponding parts of the other.

2 If $\Delta ABC \equiv \Delta XYZ$, then $m(\angle Z) = m(\angle$ .....)

3 The sum of the measures of the accumulative angles at a point equals .....°

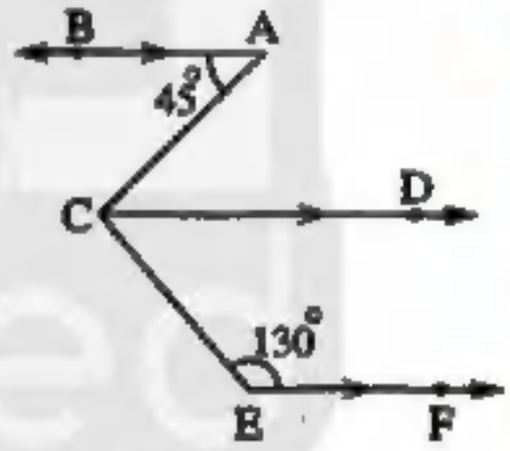
4 If $m(\angle A) = 110°$, then m (reflex $\angle A$) = ...°

5 The two adjacent angles formed by intersecting of a straight line and a ray are .....

3 [a] In the opposite figure :

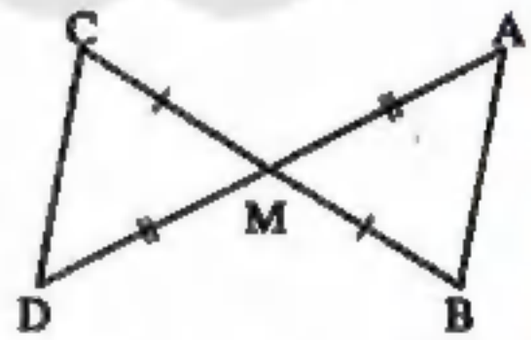
$\overrightarrow{AB} // \overrightarrow{CD} // \overrightarrow{EF}$, $m(\angle A) = 45°$, $m(\angle E) = 130°$

Find : $m(\angle ACE)$



[b] In the opposite figure :

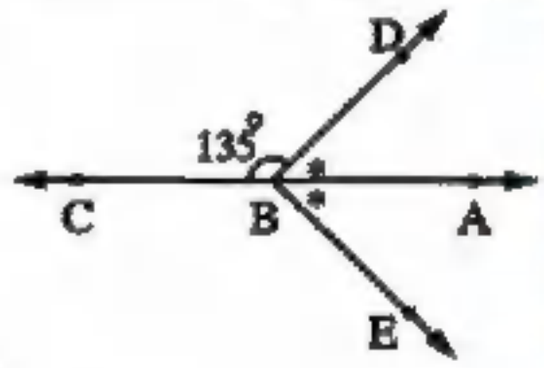
$\overline{AD} \cap \overline{BC} = \{M\}$, BM = MC , AM = MD , write the conditions for ΔAMB , ΔDMC to be congruent.



4 [a] In the opposite figure :

If $B \in \overleftrightarrow{AC}$, $m(\angle DBC) = 135°$ and $\overrightarrow{BA}$ bisects $\angle DBE$

Find : 1 $m(\angle ABD)$ 2 $m(\angle DBE)$ 3 $m(\angle CBE)$



[b] By using your geometric instruments , draw $\angle ABC$ whose measure is 130° , then draw $\overrightarrow{BF}$ to bisect the angle.

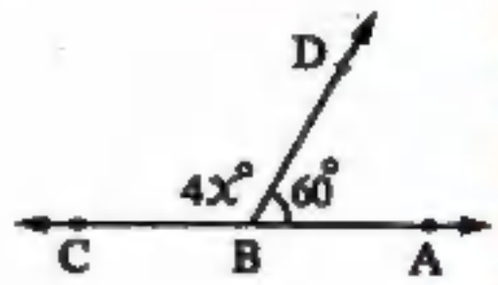
5 **[a] In the opposite figure :**

$\overleftrightarrow{AC} \cap \overleftrightarrow{BD} = \{B\}$

, m (∠ ABD) = 60°

, m (∠ DBC) = 4 $\mathcal{X}$°

Find in degrees : The value of $\mathcal{X}$

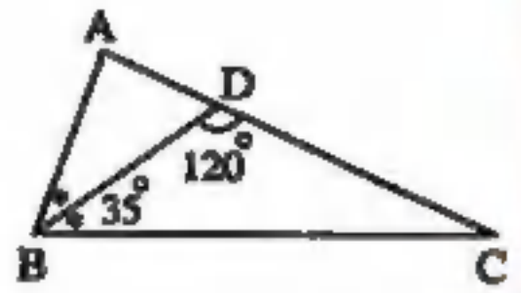


[b] In the opposite figure :

$\overrightarrow{BD}$ bisects ∠ ABC , m (∠ DBC) = 35°

, m (∠ BDC) = 120°

Find : m (∠ A) in degrees.



4 Giza Governorate

El-Haram Zone
El-Mearefa Exp. Lang. School

Answer the following questions :

1 **Choose the correct answer :**

1 If Δ ABC ≡ Δ XYZ , m (∠ A) = 50° , m (∠ B) = 60° , then m (∠ Z) = ...

(a) 50° (b) 60° (c) 70° (d) 120°

2 The sum of measures of the accumulative angles at a point equals .....

(a) 180° (b) 630° (c) 360° (d) 603°

3 The angle whose measure is 78° 60̀ , is ..... angle.

(a) a right (b) an acute (c) an obtuse (d) a straight

4 If ∠ A ≡ ∠ B and ∠ A complements ∠ B , then m (∠ A) = ...

(a) 45° (b) 90° (c) 100° (d) 180°

5 If two straight lines are parallel to a third straight line , then they are .....

(a) perpendicular. (b) parallel. (c) congruent. (d) intersecting.

6 The measure of the supplement of an angle of measure 35° equals .....

(a) 65° (b) 165° (c) 180° (d) 145°

2 **Complete the following :**

1 The perpendicular bisector of a line segment is called .....

2 If m (∠ A) = 160° , then m (reflex ∠ A) = ...°

3 The two adjacent angles formed by a straight line and a ray with a start point on this straight line are .....

4 If two straight lines intersect , then each two vertically opposite angles are .....

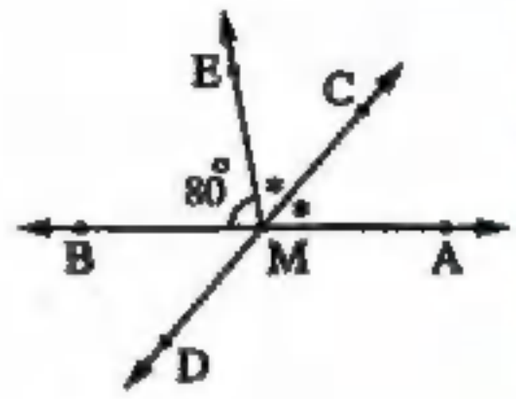
5 If $L_1 \perp L_2$ and $L_2 // L_3$, then L_1 ..... L_3

3 [a] In the opposite figure :

$\overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$, m (∠ BME) = 80°

, $\overrightarrow{MC}$ bisects ∠ AME

Find : 1 m (∠ AMC) 2 m (∠ BMD)

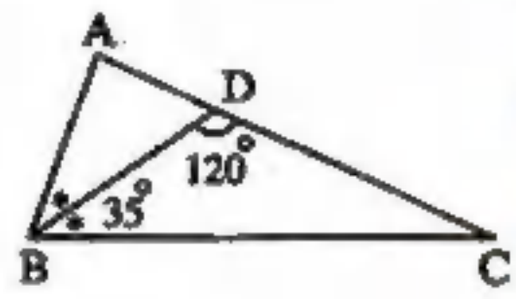


[b] In the opposite figure :

$\overrightarrow{BD}$ bisects ∠ ABC , m (∠ DBC) = 35°

, m (∠ BDC) = 120°

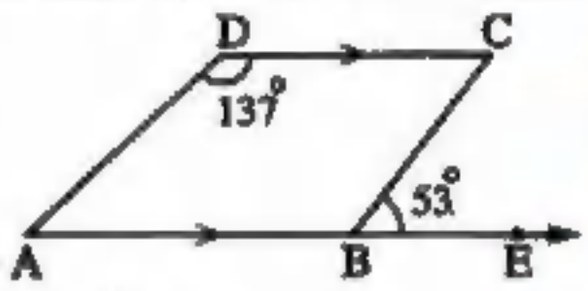
Find : m (∠ A) in degrees.



4 [a] In the opposite figure :

$\overrightarrow{AB} // \overline{DC}$, m (∠ EBC) = 53° , m (∠ D) = 137°

Is $\overline{BC} // \overline{AD}$? "State the reason"

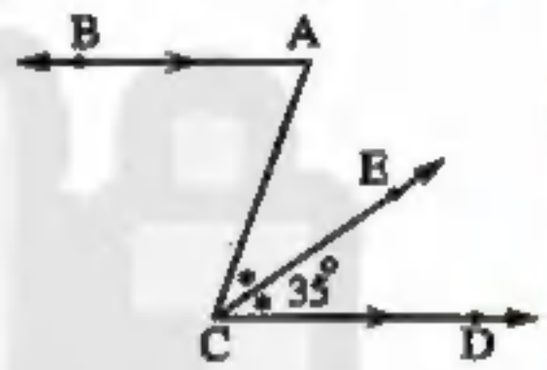


[b] In the opposite figure :

$\overrightarrow{AB} // \overrightarrow{CD}$, $\overrightarrow{CE}$ bisects ∠ ACD

, m (∠ DCE) = 35°

Find : m (∠ A)



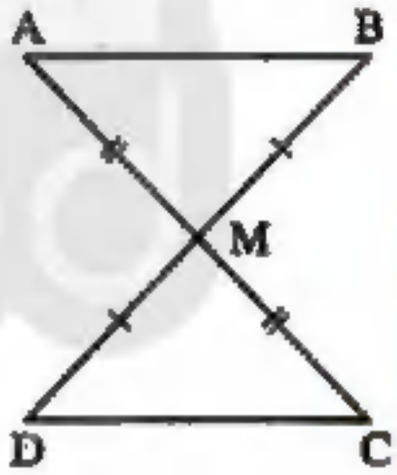
5 [a] Draw ∠ ABC of measure 85° , then bisect it. (Don't remove the arcs)

[b] In the opposite figure :

AM = CM

, BM = DM

Show with the reason if Δ ABM ≡ Δ CDM or not.



5 Giza Governorate

Boulaq El-Dakrour Dire. of Edu.
Dar El-Hanan Lang. Sch. for Girls

Answer the following questions :

1 Choose the correct answer :

1 The supplement of the angle whose measure is 30° is an angle whose measure is .....

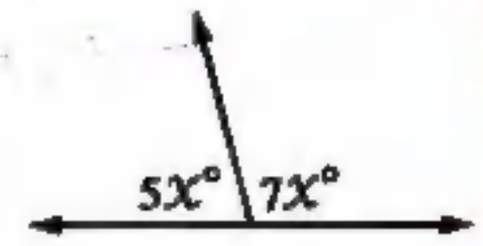
(a) 60° (b) 180° (c) 150° (d) 90°

2 If Δ ABC ≡ Δ XYZ and m (∠ A) + m (∠ B) = 110° , then m (∠ Z) = ...

(a) 50° (b) 60° (c) 70° (d) 80°

3 From the opposite figure :

The value of x = ...

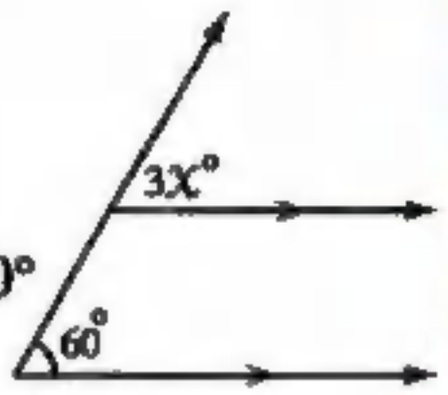


(a) 30° (b) 15°

(c) 45° (d) 18°

4 From the opposite figure :

x = ...



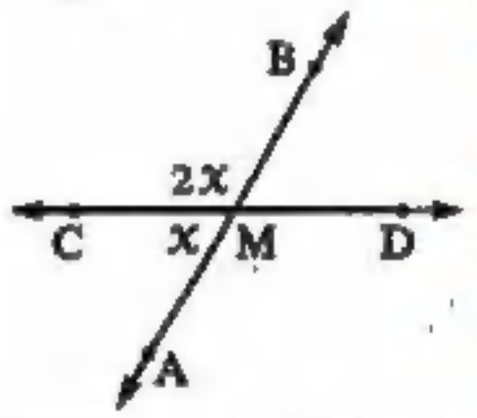
(a) 20° (b) 30° (c) 40° (d) 120°

5 The angle of measure 179° is .....

(a) acute. (b) obtuse. (c) right. (d) straight.

6 In the opposite figure :

$\overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$, then x = ...



(a) 30° (b) 60°

(c) 45° (d) 90°

2 Complete the following :

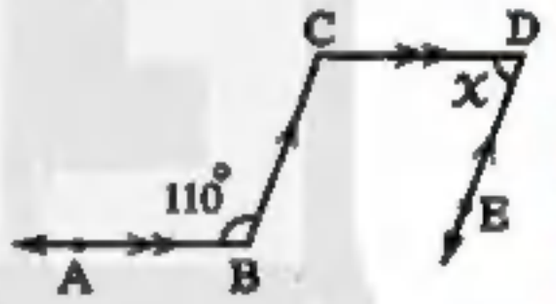
1 The complement of an angle of measure 65° is an angle of measure .....°

2 If m (∠ B) = 160° , then m (reflex ∠ B) = ...°

3 In the opposite figure :

$\overline{CD} \parallel \overrightarrow{BA}$, $\overrightarrow{DE} \parallel \overline{CB}$

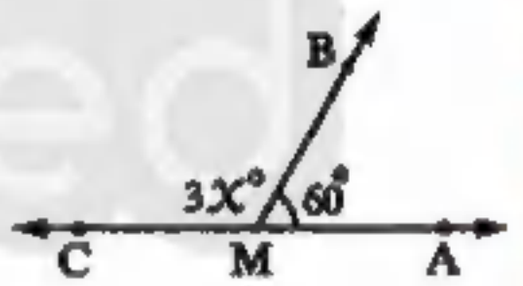
, then x = ...°



4 In the opposite figure :

If $\overrightarrow{MB} \cap \overleftrightarrow{AC} = \{M\}$, m (∠ AMB) = 60°

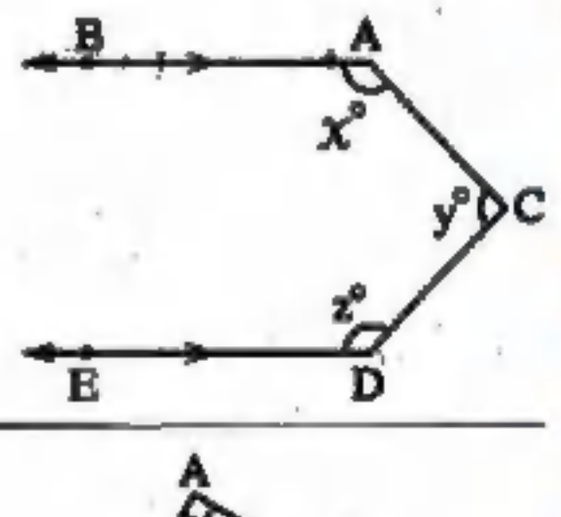
, then the value of x equals .....°



5 In the opposite figure :

$\overrightarrow{AB} \parallel \overrightarrow{DE}$

, then $x + y + z$ = ...



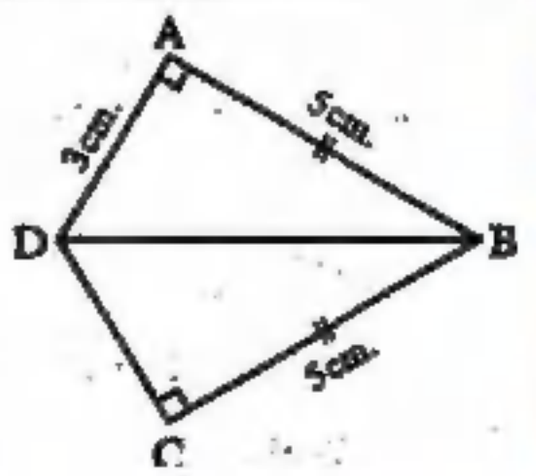
3 [a] In the opposite figure :

m (∠ A) = m (∠ C) = 90°

, AB = BC = 5 cm. , AD = 3 cm.

1 Mention the conditions for Δ ABD , Δ CBD to be congruent.

2 Find : The length of $\overline{CD}$

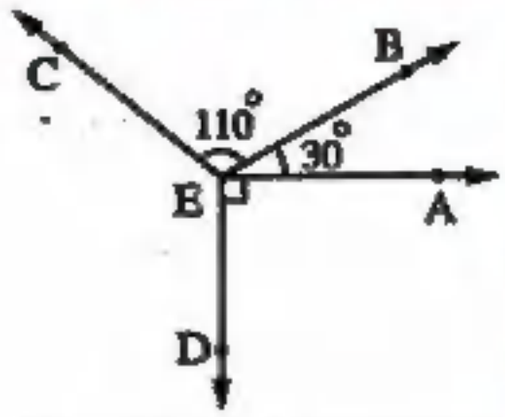


[b] In the opposite figure :

$m(\angle AEB) = 30°$, $m(\angle BEC) = 110°$

, $m(\angle AED) = 90°$

Find : $m(\angle DEC)$



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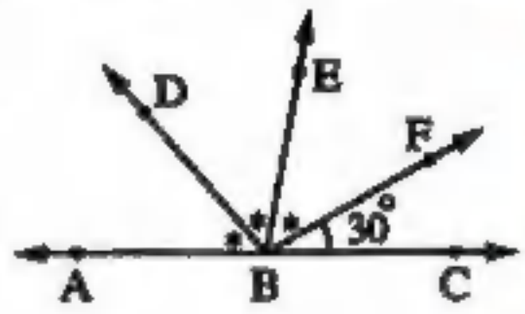
4 **[a] In the opposite figure :**

$B \in \overleftrightarrow{AC}$, $m(\angle FBC) = 30°$

, $m(\angle ABD) = m(\angle DBE) = m(\angle EBF)$

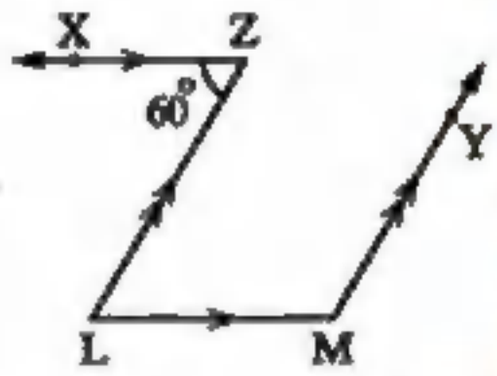
Find : $m(\angle ABE)$



[b] In the opposite figure :

$\overrightarrow{ZX} // \overrightarrow{LM}$, $\overrightarrow{LZ} // \overrightarrow{MY}$, $m(\angle Z) = 60°$

Find : [1] $m(\angle L)$ [2] $m(\angle M)$



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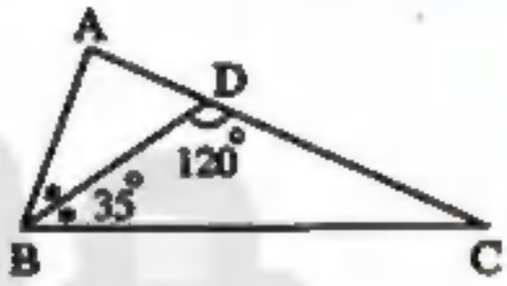
5 **[a] In the opposite figure :**

$\overrightarrow{BD}$ bisects $\angle ABC$, $m(\angle DBC) = 35°$

, $m(\angle BDC) = 120°$

Find : $m(\angle A)$

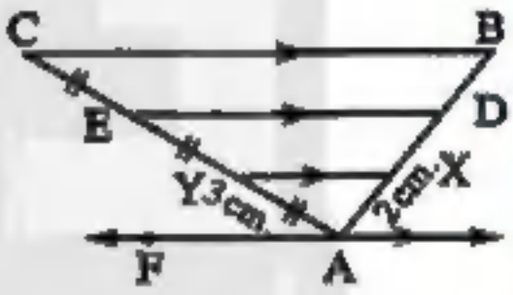


[b] In the opposite figure :

$\overleftrightarrow{AF} // \overline{XY} // \overline{DE} // \overline{BC}$ and $AY = YE = EC$, $AY = 3$ cm.

, $AX = 2$ cm. and the perimeter of $\Delta ABC = 23$ cm.

Find : The length of $\overline{BC}$



[c] Draw $\angle ABC$ of measure $100°$ and bisect it. (Don't remove the arcs)

---

6 Alexandria Governorate

East Educational Zone
Sidi Gaber Lang. Sch. for boys

Answer the following questions :

1 **Complete the following :**

[1] If $m(\angle A) = 120°$, then the measure of the reflex angle of $\angle A =$ ..... °

[2] The two adjacent angles formed by intersecting a straight line and a ray are .....

[3] If $\angle A$ supplements $\angle B$ and $\angle A$ supplements $\angle C$

, then $\angle B$ and $\angle C$ are .....

[4] Two triangles are congruent if the lengths of two sides and the measure of ..... are congruent with the corresponding parts of the other.

5 If ∠ A and ∠ B are complementary angles , m (∠ A) = 2 m (∠ B) , then m (∠ B) = ...°

2 Choose the correct answer :

1 If two straight lines are perpendicular to a third , then the two straight lines are .....

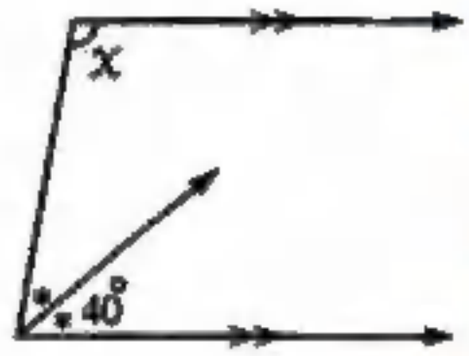
(a) perpendicular. (b) congruent. (c) parallel. (d) intersecting.

2 The axis of symmetry of a line segment is .....

(a) perpendicular from its midpoint. (b) equal to it.

(c) parallel to it. (d) congruent to it.

3 In the opposite figure :

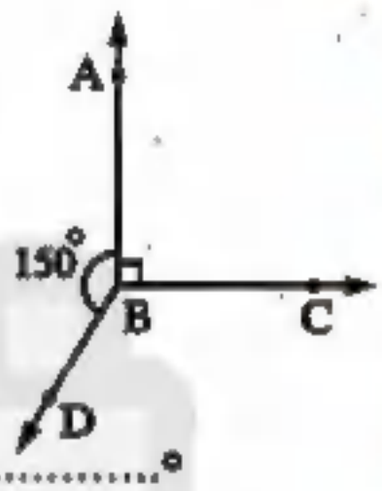


x = ...°

(a) 80 (b) 120

(c) 100 (d) 180

4 In the opposite figure :



m (∠ CBD) = ...°

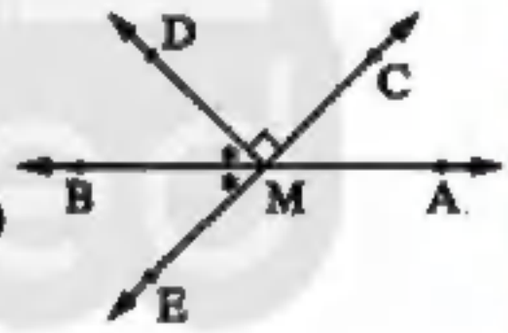
(a) 100 (b) 120

(c) 140 (d) 240

5 If Δ ABC ≡ Δ XYZ , m (∠ Z) = 55° , then m (∠ A) + m (∠ B) = ...°

(a) 110 (b) 115 (c) 120 (d) 125

3 [a] In the opposite figure :



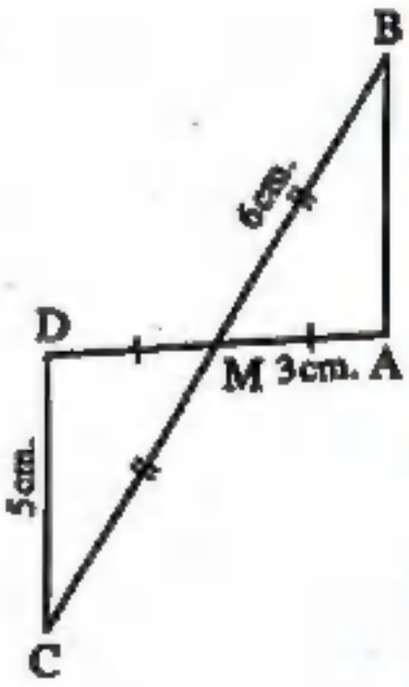
$\overleftrightarrow{AB} \cap \overleftrightarrow{CE} = \{M\}$, $\overrightarrow{MD} \perp \overrightarrow{MC}$, $\overrightarrow{MB}$ bisects ∠ DME

Find showing the reason : 1 m (∠ BME) 2 m (∠ AMC)

3 m (∠ AME)

[b] Draw the line segment AB of length 8 cm. , then construct the axis of symmetry of $\overline{AB}$ (Don't remove the arcs)

4 [a] In the opposite figure :



Complete :

1 Δ ABM ≡ Δ .....

2 m (∠ B) = m (∠ .....)

3 m (∠ A) = m (∠ .....)

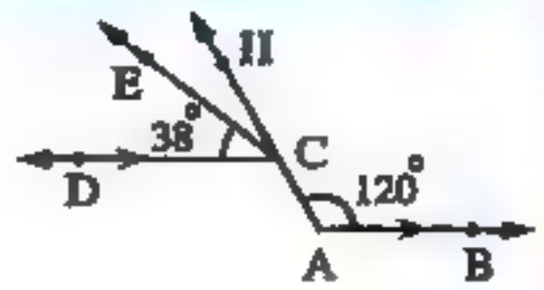
4 The perimeter of Δ DMC = ... cm.

[b] In [redacted] opposite figure :

$\overline{AB} // \overline{DC}$, m (∠ A) = 120° , $H \in \overline{AC}$

, m (∠ ECD) = 38°

Find : m (∠ ACD) , m (∠ HCE) (showing the reason)



5 **In [redacted] opposite figure :**

$\overleftrightarrow{OR}$ is the axis of symmetry of the shape NERAM , $O \in \overleftrightarrow{MN}$

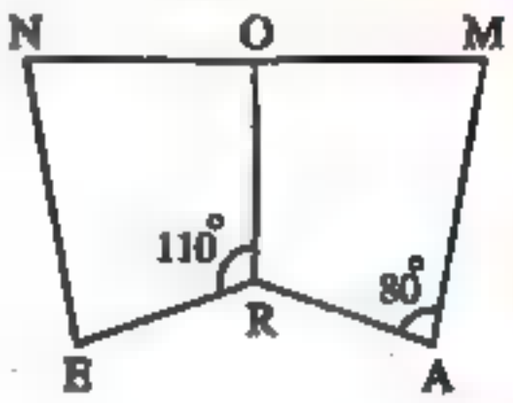
Complete : [1] Quad AMOR ≡ Quad .....

[2] m (∠ NOR) = [redacted] (∠ .....)

[3] m (∠ AMO) = m (∠ .....)

[4] m (∠ ORA) = m (∠ .....) = ...°

[5] m (∠ NER) = m (∠ .....) = ...°



7 Alexandria Governorate

Borg El-Arab Educational Zone
[redacted]-Safwa Integrated Schools

Answer the following questions : (Calculator is allowed)

1 **Complete each of the following :**

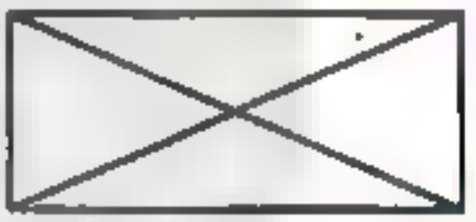
[1] The complement of the angle of measure 55° is an angle of measure .....°

[2] The sum of measures of the accumulative angles at [redacted] point equals .....°

[3] If m (∠ B) = 160° , then m (reflex ∠ B) = ...°

[4] The perpendicular bisector of a line segment is called .....

[5] The number of triangles in the opposite figure is .....



2 **Choose the correct [redacted] :**

[1] If $L_1 // L_2$ and $L_2 \perp L_3$, then .....

(a) $L_1 \perp L_2$ (b) $L_3 // L_2$ (c) $L_1 \perp L_3$ (d) $L_3 // L_1$

[2] If Δ ABC ≡ Δ XYZ and m (∠ A) + m (∠ B) = 110° , then m (∠ Z) = ...°

(a) 50 (b) 60 (c) 70 (d) 80

[3] If the ratio between the measures of two supplementary angles is [redacted] : 13 , then the measure of the smaller angle is .....°

(a) 50 (b) 130 (c) 150 (d) 180°

[4] The type of the angle of measure 89° 60` is .....

(a) acute. (b) obtuse. (c) right. (d) reflex.

5 The two diagonals are perpendicular and equal in length in the .....

(a) rectangle. (b) rhombus. (c) square. (d) parallelogram.

6 If $\Delta ABC \equiv \Delta LMN$, then $\overline{AC}$ ..... $\overline{LN}$

(a) = (b) ≡ (c) < (d) >

---

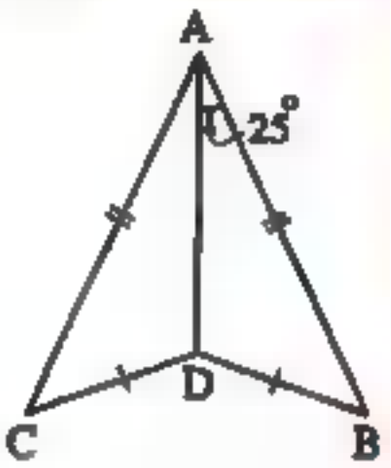
3 [a] In the opposite figure :

$AB = AC$, $BD = CD$

, $m(\angle BAD) = 25°$

Is $\Delta ADC \equiv \Delta ADB$? Why ?

Find : $m(\angle CAB)$



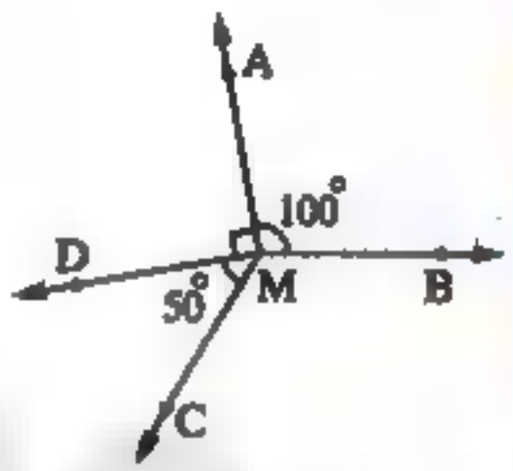
[b] In the opposite figure :

$m(\angle BMA) = 100°$

, $m(\angle AMD) = 90°$

, $m(\angle DMC) = 50°$

Find with steps : $m(\angle BMC)$



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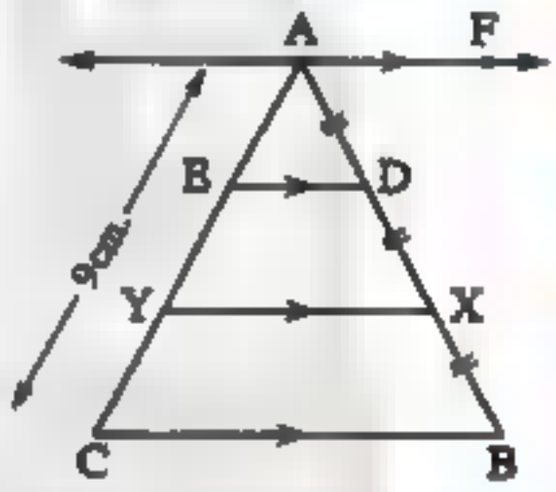
4 [a] In the opposite figure :

$\overleftrightarrow{AF} // \overleftrightarrow{ED} // \overleftrightarrow{YX} // \overleftrightarrow{CB}$

, $AD = DX = XB$, $AC = 9$ cm.

Find : The length of $\overline{AY}$ (Give reason)

[b] Draw $\angle ABC$ of measure 100° and bisect it.



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5 [a] In the opposite figure :

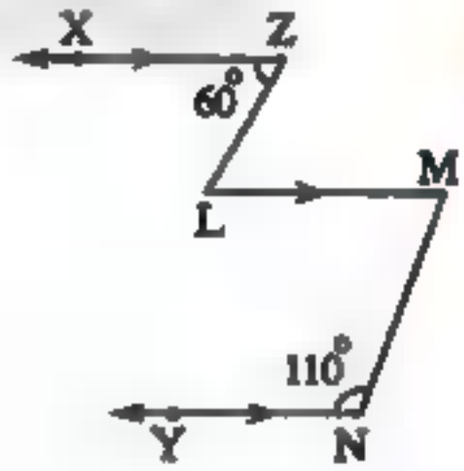
$\overrightarrow{ZX} // \overrightarrow{LM}$

, $\overrightarrow{LM} // \overrightarrow{NY}$

, $m(\angle N) = 110°$

, $m(\angle Z) = 60°$

Find : 1 $m(\angle L)$ 2 $m(\angle M)$



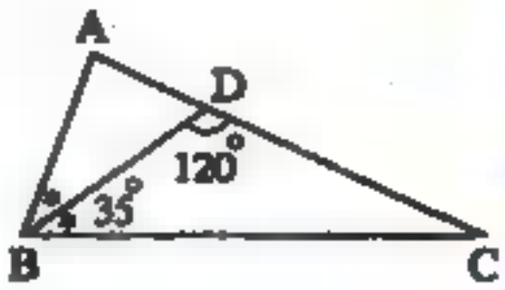
[b] In the opposite figure :

$\overrightarrow{BD}$ bisects $\angle ABC$

, $m(\angle DBC) = 35°$

, $m(\angle BDC) = 120°$

Find : $m(\angle A)$



8 El-Kalyoubia Governorate

Directorate of Education
Mathematics Supervision

Answer the following questions :

1 Choose the correct answer :

1 If Δ ABC ≡ Δ XYZ , then AC = ...

(a) XY (b) XZ (c) YZ (d) AB

2 If m (∠ B) = 105° , then m (reflex ∠ B) = ...

(a) 255° (b) 75° (c) 105° (d) 50°

3 If $\overline{AB} \equiv \overline{CD}$ and AB = 4 cm. , then AB + 2 CD = ... cm.

(a) 10 (b) 4 (c) 8 (d) 12

4 The measure of the supplementary of the angle whose [redacted] is 30° equals .....°

(a) 60 (b) [redacted] (c) 150 (d) 90

5 A cube is of volume 125 cm^3 , then the area of its base = ... cm^2

(a) 5 (b) 15 (c) 25 (d) 10

6 The measure of the right angle is .....°

(a) 60 (b) 90 (c) 180 (d) 70

2 Complete the following :

1 The two diagonals are equal in length in ..... and .....

2 The perpendicular bisector of a line segment is called .....

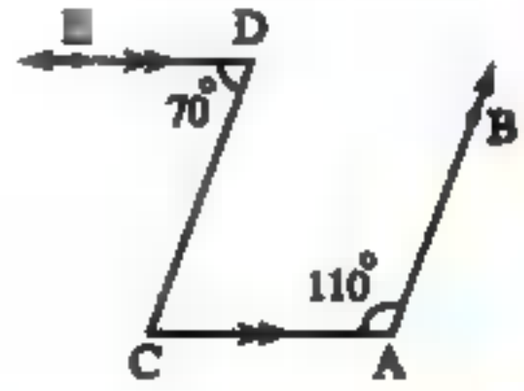
3 The sum of the measures of the accumulative angles at a point equals .....°

4 If Δ ABC ≡ Δ XYZ , m (∠ A) + m (∠ B) = 100° , then m (∠ Z) = ...°

5 If two straight lines are perpendicular to a third , then the two straight lines are .....

3 [a] In the opposite figure :

$\overrightarrow{DE} \parallel \overrightarrow{AC}$, m (∠ A) = 110° , m (∠ D) = 70°



Complete the following :

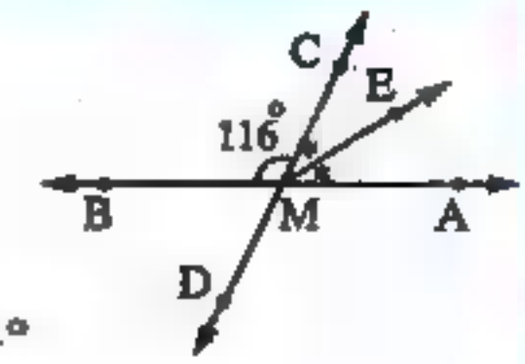
1 m (∠ C) = ... because .....

2 Is $\overrightarrow{AB} \parallel \overrightarrow{CD}$? (.....) because .....

[b] Using the geometric instruments , draw ∠ ABC where m (∠ B) = 120° , then draw $\overrightarrow{BD}$ to bisect the angle. (Don't remove the arcs)

5 **[a] In the opposite figure :**

$\overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$, $\overrightarrow{ME}$ bisects $\angle AMC$, $m(\angle BMC) = 116°$



Complete the following :

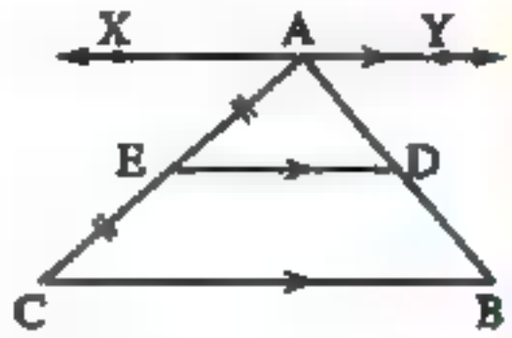
1 $m(\angle AMC) =$ ..... °

2 $m(\angle AMD) =$ ..... °

3 $m(\angle AME) =$ ..... °

[b] In the opposite figure :

$\overleftrightarrow{XY} // \overline{ED} // \overline{BC}$, $AE = EC$



Complete the following :

1 $AD =$ .....

2 $AD : AB =$ ..... : .....

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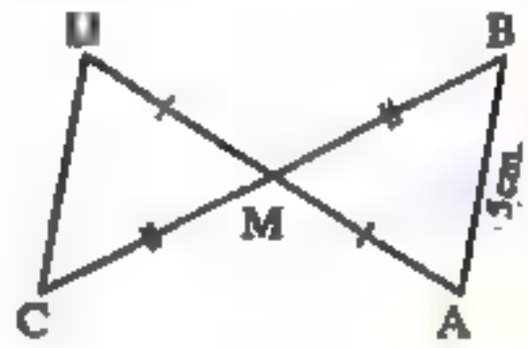
5 **[a] From the opposite figure complete the following :**



1 $\Delta ABM \equiv \Delta$ .....

2 $CD =$ ..... cm.

3 $m(\angle B) = m(\angle$ .....$)$

[b] Mention two cases of congruency of two triangles.

Answer the following questions :

1 **Choose the correct answer :**

1 If $\angle X$ complements $\angle Y$ and $\angle X \equiv \angle Y$, then $m(\angle X) =$ ..... °

(a) 45 (b) 90 (c) 20 (d) 180

2 A square is of perimeter 20 cm. , then its area = ... cm^2

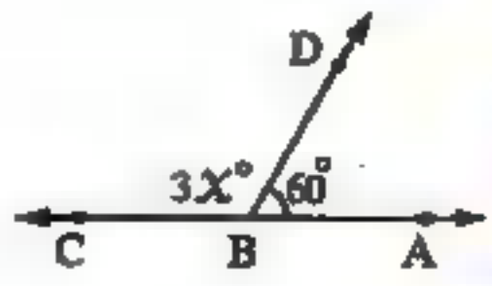
(a) 4 (b) 5 (c) 25 (d) 400

3 The two diagonals are equal in length in the .....

(a) rhombus. (b) parallelogram. (c) trapezium. (d) rectangle.

4 **In the opposite figure :**

$B \in \overleftrightarrow{AC}$, then $x =$ .....



(a) 30 (b) 120

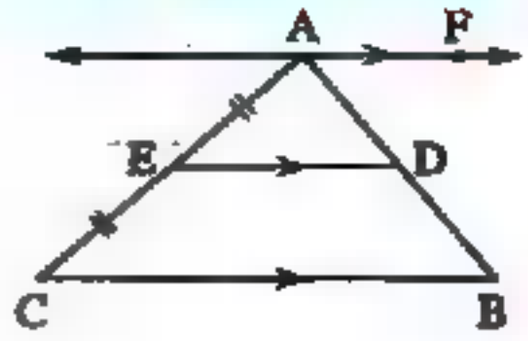
(c) 40 (d) 150

5 If $m(\angle A) = 110°$, then m (reflex $\angle A$) = ...

(a) 70° (b) 360° (c) 250° (d) 150°

6 **In the opposite figure :**

If $\overleftrightarrow{AF} // \overline{ED} // \overline{CB}$, AE = EC , then AD : AB = ...



(a) 2 : 1 (b) 3 : 2

(c) 1 : 3 (d) 1 : 2

---

2 **Complete each of the following :**

1 If $\Delta ABC \equiv \Delta XYZ$, $m(\angle A) + m(\angle B) = 120°$, then $m(\angle Z)$ = ...°

2 If a straight line intersects two parallel lines , then each two corresponding angles are .....

3 If $\Delta ABC \equiv \Delta XYZ$, then AC = ...

4 Two right-angled triangles are congruent if .....

5 If two straight lines intersect , then the measures of each two vertically opposite angles are .....

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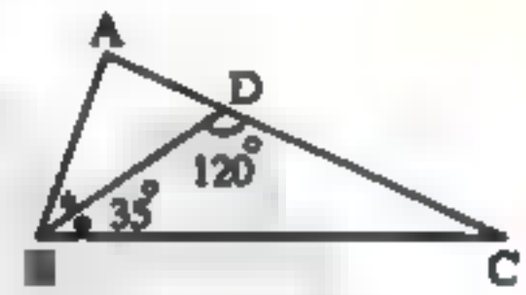
3 **[a] In the opposite figure :**

$\overrightarrow{BD}$ bisects $\angle ABC$, $m(\angle DBC) = 35°$

, $m(\angle BDC) = 120°$

Find : $m(\angle C)$, $m(\angle ABC)$ and $m(\angle A)$



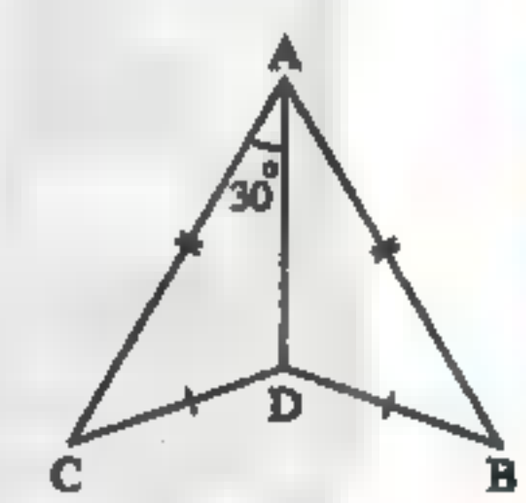
[b] In the opposite figure :

AC = AB , DC = DB

, $m(\angle CAD) = 30°$

1 **Prove that :** $\Delta ABD \equiv \Delta ACD$

2 **Find :** $m(\angle CAB)$



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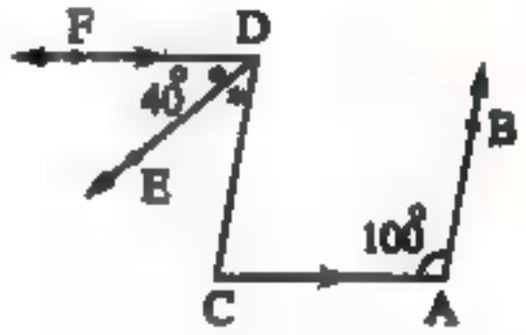
4 **[a] In the opposite figure :**

$\overrightarrow{DF} // \overline{AC}$, $m(\angle A) = 100°$

, $\overrightarrow{DE}$ bisects $\angle FDC$, $m(\angle FDE) = 40°$

1 **Find :** $m(\angle FDC)$ and $m(\angle C)$

2 **Prove that :** $\overline{CD} // \overrightarrow{AB}$



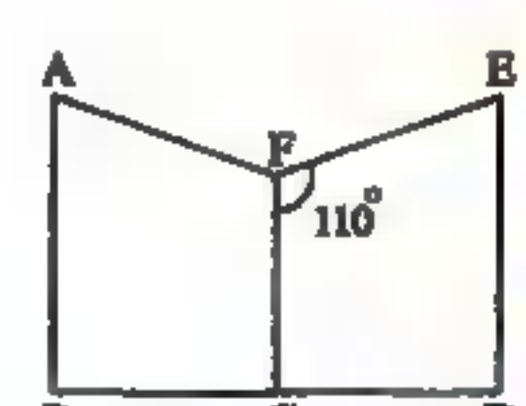
[b] In the opposite figure :

The polygon ABCF = the polygon EDCF

, $m(\angle EFC) = 110°$, BC = 5 cm.

Find : 1 $m(\angle AFC)$, $m(\angle AFE)$ and $m(\angle FCB)$

2 The length of $\overline{BD}$

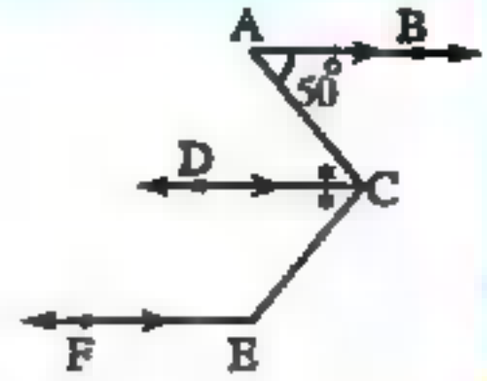


5 **[a] In the opposite figure :**

$\overrightarrow{AB} // \overrightarrow{CD} // \overrightarrow{EF}$, $\overrightarrow{CD}$ bisects $\angle ACE$

, $m(\angle A) = 50°$

Find : $m(\angle ACE)$ and $m(\angle E)$



[b] Using the ruler and compasses , draw the triangle ABC in which BC = 6 cm.

, AB = AC = 5 cm. Draw $\overline{AD} \perp \overline{BC}$ where $\overline{AD} \cap \overline{BC} = \{D\}$

(Don't remove the arcs)

Answer the following questions : (Calculator is permitted)

1 **Choose the correct answer :**

1 The sum of the measures of the accumulative angles at a point equlas .....°

(a) 90 (b) 180 (c) 270 (d) 360

2 If two triangles ABC and XYZ are congruent , then .....

(a) BC = XZ (b) YX = CA (c) ZY = CB (d) AB = YZ

3 If a straight line intersects two parallel straight lines , then each two interior angles in the same side of the transversal are .....

(a) equal. (b) supplementary. (c) corresponding. (d) complementary.

4 If $\Delta ABC \cong \Delta XYZ$, $m(\angle A) + m(\angle B) = 115°$, then $m(\angle Z) =$ .....°

(a) 115 (b) 65 (c) 15 (d) 70

5 If $m(\angle A) = 90°$, then m (reflex $\angle A$) = ...

(a) 270 (b) 180 (c) 90 (d) 360

6 If $\angle A$ supplements $\angle$ B and $\angle A \cong \angle B$, then $m(\angle B) =$ .....°

(a) 45 (b) 90 (c) 120 (d) 60

2 **Complete each of the following :**

1 The angle whose measure is 40° complements an angle of measure .....°

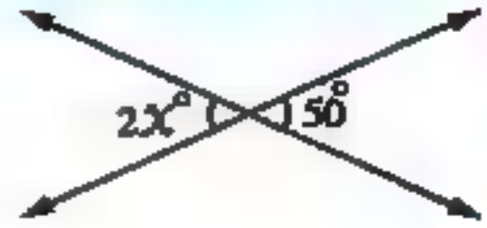
2 Two triangles are congruent if two sides and the ..... in one of them are congruent to their corresponding parts of the other.

3 If two straight lines are perpendicular to a third line , then these two straight lines are .....

4 If $L_1 // L_2$ and $L_1 \perp L_3$, then L_3 ..... L_2

5 **In [illegible] opposite figure :**

x = ...



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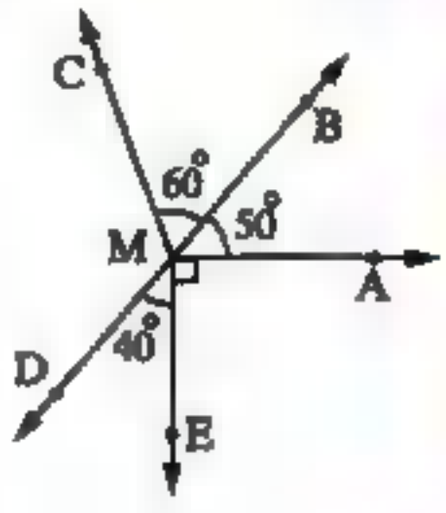
3 **[a] In the opposite figure :**

m (∠ AMB) = 50°

, m (∠ BMC) = 60°

, m (∠ DME) = 40° and $\overrightarrow{MA} \perp \overrightarrow{ME}$

Find : m (∠ DMC)



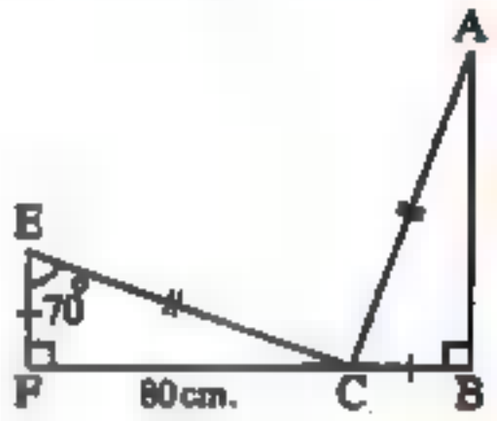
[b] In the opposite figure :

CB = FE , AC = EC

, m (∠ B) = m (∠ F) = 90°

, m (∠ E) = 70° and FC = 80 cm.

Find : m (∠ A) and the length of $\overline{AB}$



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4 **[a]** Draw the angle ABC where m (∠ B) = 130° , using the ruler and the compasses bisect ∠ B

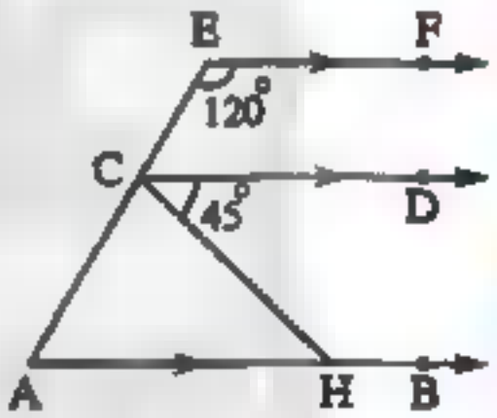
[b] In the opposite figure :

$\overrightarrow{EF} // \overrightarrow{CD} // \overrightarrow{AB}$

, m (∠ CEF) = 120°

, m (∠ HCD) = 45°

Find : The measures of the angles of Δ AHC



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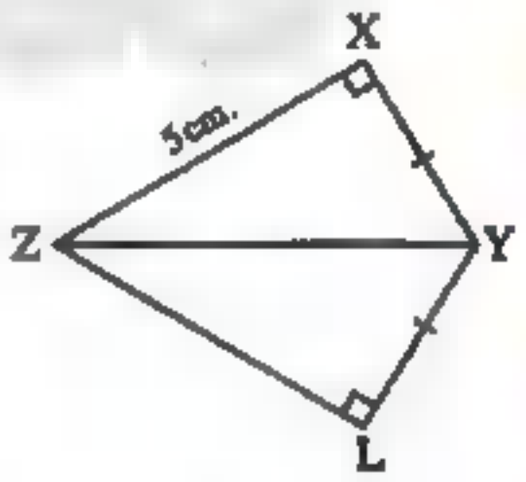
5 **[a] In the opposite figure :**

m (∠ ZXY) = m (∠ ZLY) = 90°

, XY = LY and ZX = 5 cm.

1 Is Δ YXZ ≅ Δ YLZ ? Why ?

2 **Find :** The length of $\overline{ZL}$



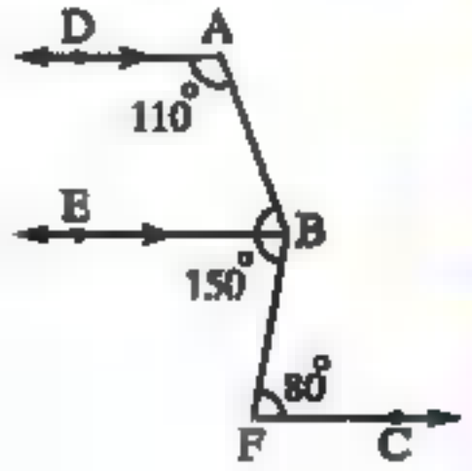
[b] In the opposite figure :

$\overrightarrow{AD} // \overrightarrow{BE}$

, m (∠ F) = 80°

, m (∠ A) = 110° and m (∠ ABF) = 150°

Is $\overrightarrow{BE} // \overrightarrow{FC}$? (Give reason)



11 El-Dakahlia Governorate

Talkha Educational Directorate
A.M.D.I. School

Answer the following questions :

1 Choose the correct answer :

1 The sum of measures of the accumulative angles ▪ a point is .....

(a) 180° (b) 90° (c) 360° (d) 60°

2 The acute angle supplements ..... angle.

(a) ▪ acute (b) ▪ obtuse (c) ▪ right (d) a reflex

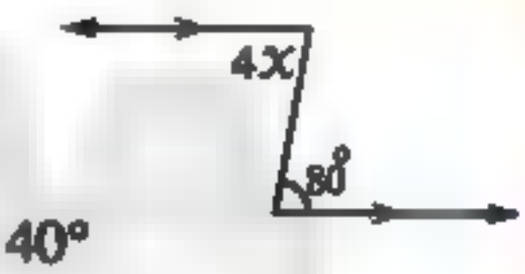
3 The two straight lines parallel to a third straight line are .....

(a) intersecting. (b) congruent. (c) parallel. (d) perpendicular.

4 If $\Delta ABC \equiv \Delta DEF$, $m(\angle A) + m(\angle B) = 110°$, then $m(\angle F) =$ .....

(a) 180° (b) 110° (c) 80° (d) 70°

5 In the opposite figure :



$x =$ .....

(a) 80° (b) 100° (c) 20° (d) 40°

6 $\overrightarrow{AB} \cup \overrightarrow{AC}$ = ...

(a) $\overrightarrow{AB}$ (b) $\angle ABC$ (c) $\angle BAC$ (d) $\varnothing$

2 Complete the following :

1 The complement of an angle of measure 75° is an angle of measure .....

2 If $m(\angle A) = 160°$, then ▪ (reflex $\angle A$) = ...°

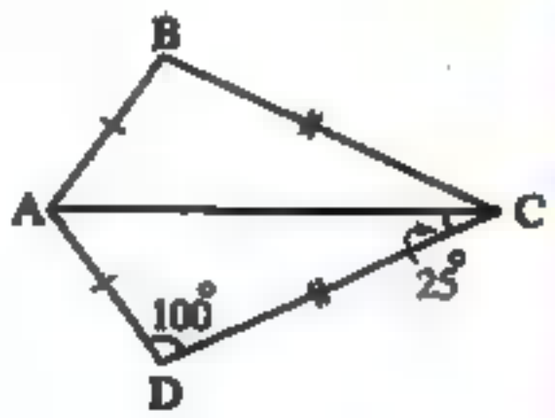
3 If two straight lines intersect , then the measures of each two vertically opposite angles are .....

4 If $\overline{AB} \equiv \overline{XY}$, then AB – XY = ...

5 If $\angle A$ supplements $\angle B$ and $\angle A \equiv \angle$ ▪ , then $m(\angle B) =$ .....°

3 [a] State any two cases of congruency of two triangles.

[b] From the opposite figure :



1 Prove that : $\Delta ABC \equiv \Delta ADC$

2 Find : $m(\angle BAC)$

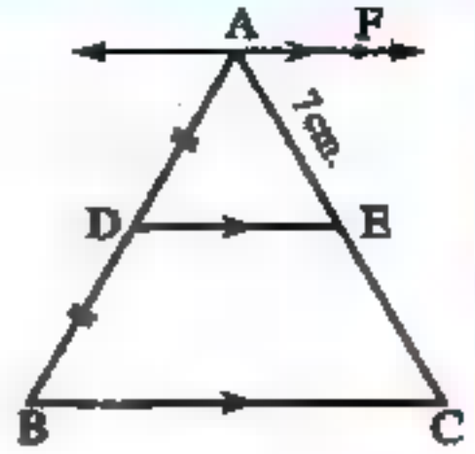
[a] In the opposite figure :

$\overleftrightarrow{AF} // \overline{DE} // \overline{BC}$

, D is the midpoint of $\overline{AB}$

, AE = 7 cm.

Find : AC



[b] Using the geometric instruments , draw Δ ABC in which BC = 6 cm. , AB = AC = 5 cm.

, then draw $\overline{AD} \perp \overline{BC}$ where $\overline{AD} \cap \overline{BC} = \{D\}$, **Find by measuring :** AD

(Don't remove the arcs)

---

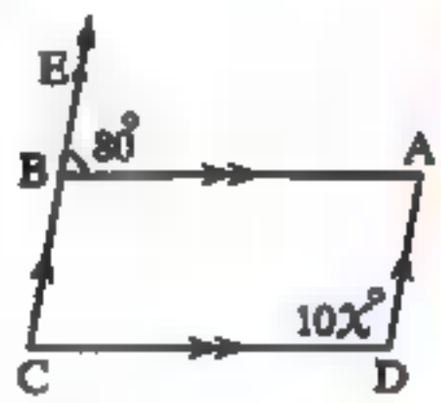
5 [a] In [redacted] opposite figure :

$\overleftrightarrow{AB} // \overleftrightarrow{DC}$, $\overleftrightarrow{BC} // \overleftrightarrow{AD}$

, $E \in \overleftrightarrow{BC}$, m (∠ D) = 10 $x°$

, m (∠ ABE) = 80°

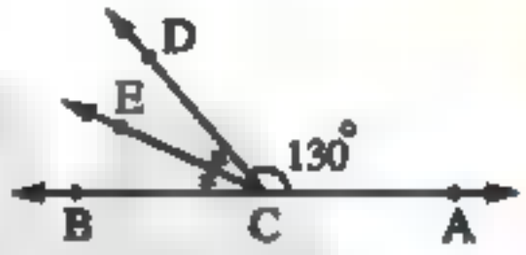
Find : The value of x



[b] In the opposite figure :

$C \in \overleftrightarrow{AB}$, m (∠ ACD) = 130° , $\overrightarrow{CE}$ bisects ∠ BCD

Find : [redacted] (∠ DCE)



Answer the following questions :

1 Choose the correct answer :

1 The angle of [redacted] 60° supplements an angle of [redacted] .....°

(a) 40 (b) 30 (c) 120 (d) 90

2 If two straight lines are perpendicular to a third , then the two straight lines are .....

(a) perpendicular. (b) intersecting. (c) parallel. (d) congruent.

3 If Δ ABC ≡ Δ XYZ , m (∠ A) + [redacted] (∠ B) = 140° , then m (∠ Z) = ...°

(a) 60 (b) 40 (c) 80 (d) 140

4 The number of [redacted] of symmetry of the square equals .....

(a) 1 (b) 2 (c) 3 (d) 4

5 If a straight line cuts two parallel lines , then each two corresponding angles [redacted] .....

(a) equal in [redacted] (b) complementary.

(c) supplementary. (d) right.

6 If m (∠ A) = 100° , then m (reflex ∠ A) = ...°

(a) 80 (b) 260 (c) 50 (d) 100

---

2 Complete the following :

1 If two adjacent angles are complementary , then their outer sides are .....

2 If Δ ABC ≡ Δ XYZ , then AC = ...

3 If ∠ C ≡ ∠ D , m (∠ C) = 90° , then m (∠ D) = ...°

4 The measure of the straight angle equals .....°

5 The perimeter of a square is 40 cm. , then its side length is ..... cm.

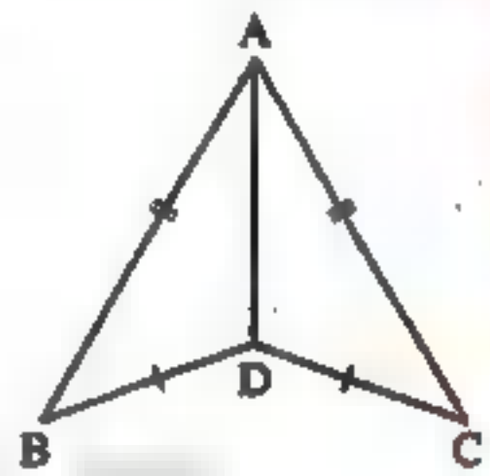
---

3 [a] In the opposite figure :

AC = AB

, DC = DB

Is Δ ADB ≡ Δ ADC ? Why ?



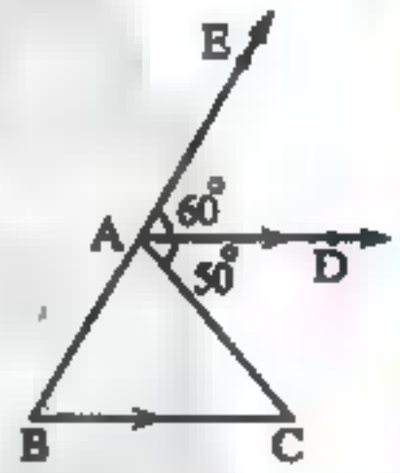
[b] In the opposite figure :

$\overrightarrow{AD} // \overrightarrow{BC}$

, m (∠ EAD) = 60°

, m (∠ CAD) = 50°

Find : 1 m (∠ C) 2 m (∠ B) 3 m (∠ BAC)



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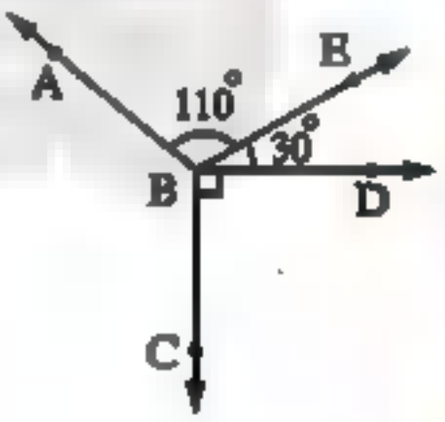
4 [a] In the opposite figure :

m (∠ DBE) = 30°

, ∠ CBD is a right angle

, m (∠ EBA) = 110°

Find : m (∠ ABC)



[b] Draw $\overline{AB}$ of length 6 cm. and bisect it. (Don't remove the arcs)

---

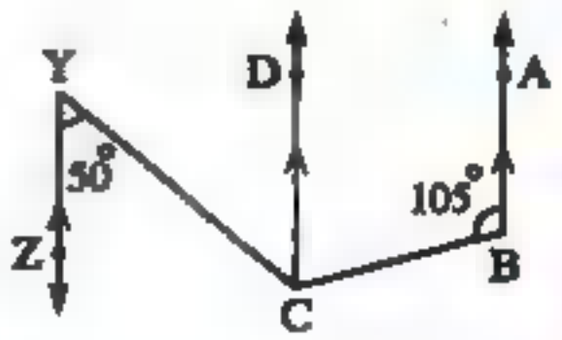
5 [a] In the opposite figure :

$\overrightarrow{BA} // \overrightarrow{CD} // \overrightarrow{YZ}$

, m (∠ ABC) = 105°

, m (∠ ZYC) = 50°

Find : 1 m (∠ YCD) 2 m (∠ BCD) 3 m (∠ BCY)



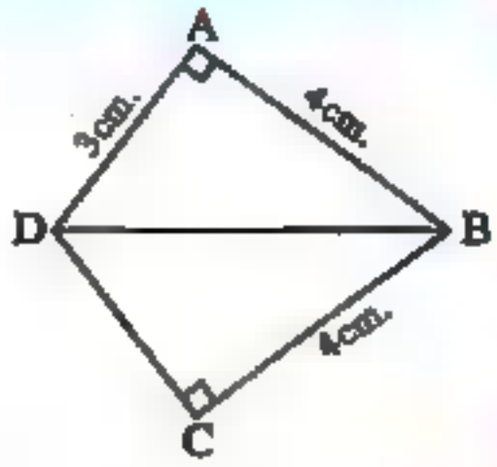
[b] In the opposite figure :

$AB = BC = 4$ cm. , $AD = 3$ cm.

, $m(\angle A) = m(\angle C) = 90°$

1 Is $\Delta ABD \equiv \Delta CBD$? Why ?

2 Find : The length of $\overline{CD}$



13 Damietta Governorate

Damietta Inspection of Mathematics
Official Language Schools

Answer the following questions :

1 Choose the correct answer :

1 If $\angle X$ supplements $\angle Y$ and $\angle X \equiv \angle Y$, then $m(\angle X) =$ .....°

(a) 45 (b) 90 (c) 180 (d) 360

2 If $\Delta ABC \equiv \Delta XYZ$, then .....

(a) $AB = YZ$ (b) $BC = XZ$ (c) $YX = CA$ (d) $ZY = CB$

3 The centimeter cube is a unit for measuring the .....

(a) perimeter. (b) area. (c) volume. (d) length.

4 Two straight lines are perpendicular to a third line , then the two straight lines are .....

(a) perpendicular. (b) parallel. (c) congruent. (d) intersecting.

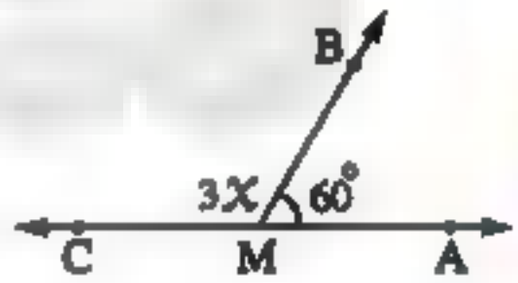
5 $\overline{XY}$ ..... $\overleftrightarrow{XY}$

(a) $\nsubseteq$ (b) $\in$ (c) $\subset$ (d) $\not\subset$

6 **In the opposite figure :**

If $\overleftrightarrow{AC} \cap \overleftrightarrow{MB} = \{M\}$

, then the value of $x =$ .....°



(a) 20 (b) 30 (c) 40 (d) 60

2 Complete each of the following :

1 If $m(\angle A) = 120°$, then m (reflex $\angle A$) = ...°

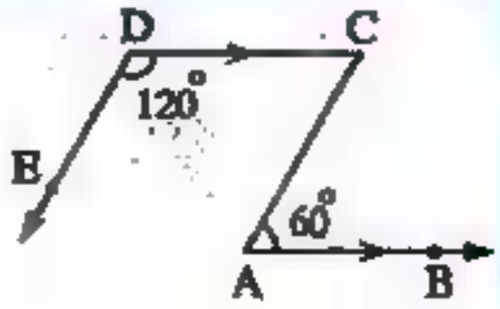
2 If the perimeter of a square is 20 cm. , then its area equals ..... cm^2

3 The number of edges of the cuboid is .....

4 If a straight line cuts two parallel straight lines , then each two alternate angles are .....

5 If $\overline{AB} \equiv \overline{CD}$, then $AB - CD \equiv$ .....

3 **[a] In the opposite figure :**



$\overrightarrow{AB} // \overline{DC}$

, m (∠ A) = 60°

, m (∠ D) = 120°

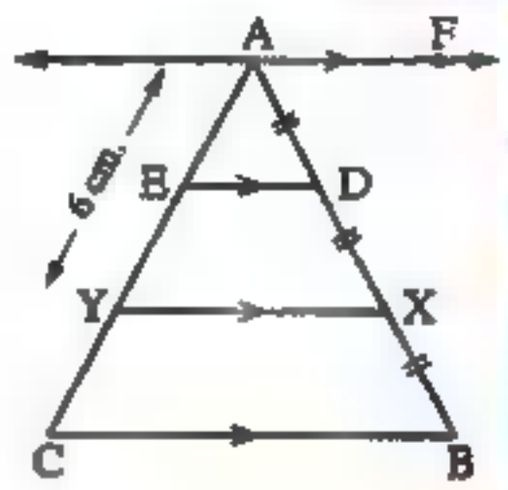
1 **Find :** m (∠ C) 2 **Is** $\overline{AC} // \overrightarrow{DE}$ **? Why ? (Write the steps)**

[b] Draw ∠ ABC where m (∠ B) = 115° Using the ruler and compasses bisect ∠ B by $\overrightarrow{BD}$

(Don't remove the arcs)

---

4 **[a] In the opposite figure :**



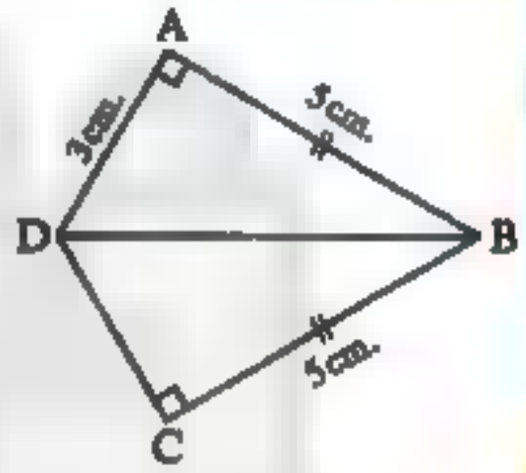
$\overleftrightarrow{AF} // \overline{DE} // \overline{XY} // \overline{BC}$

, AD = DX = XB

, AY = 6 cm.

Find : The length of $\overline{AC}$ **(Give the reason)**

[b] In the opposite figure :



m (∠ BAD) = m (∠ BCD) = 90°

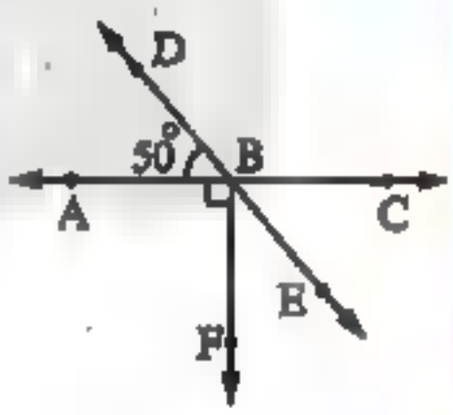
, AB = CB = 5 cm. , AD = 3 cm.

Mention the conditions for Δ ABD , Δ CBD ■ be congruent

, **then find :** The length of $\overline{CD}$

---

5 **[a] In the opposite figure :**



$\overleftrightarrow{AC} \cap \overleftrightarrow{DE} = \{B\}$

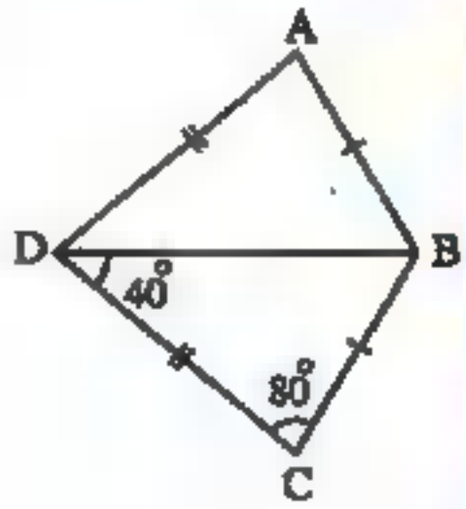
, m (∠ ABD) = 50°

, m (∠ ABF) = 90°

Find showing the steps :

1 ■ (∠ DBC) 2 ■ (∠ CBE) 3 ■ (∠ FBE)

[b] In the opposite figure :



AB = BC , AD = CD

, m (∠ C) = 80°

, m (∠ BDC) = 40°

Is Δ CBD ≡ Δ ABD ? Why ?

and find : m (∠ ABD)

14 Souhag Governorate

Maths Supervision

Answer the following questions :

1 Choose the correct answer :

1 If $\angle X \equiv \angle Y$ and $\angle X$, $\angle Y$ are supplementary angles , then m ($\angle X$) = ...

(a) 45° (b) 90° (c) 135° (d) 180°

2 If two straight lines are perpendicular to a third line , then the two straight lines are .....

(a) perpendicular. (b) parallel. (c) congruent. (d) intersecting.

3 If $\Delta XYZ \equiv \Delta ABC$ and m ($\angle A$) + m ($\angle B$) = 100° , then m ($\angle Z$) = ...

(a) 50° (b) 80° (c) 100° (d) 360°

4 The angle whose measure is more than 90° and less than 180° is .....

(a) obtuse. (b) acute. (c) right. (d) straight.

5 If m ($\angle X$) = 2 m ($\angle Y$) , $\angle X$ and $\angle Y$ are two complementary angles , then m ($\angle Y$) = ...

(a) 90° (b) 45° (c) 30° (d) 15°

6 The sum of the measures of the accumulative angles at a point is .....

(a) 45° (b) 90° (c) 180° (d) 360°

2 Complete each of the following :

1 If two straight lines intersects , then each two vertically opposite angles are .....

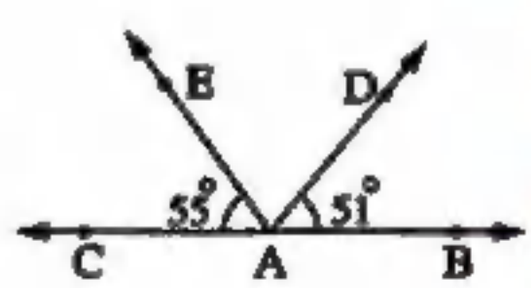
2 If $\Delta ABC \equiv \Delta XYZ$, then XZ = ...

3 If $\angle A$ supplements $\angle B$, m ($\angle A$) = 100° , then m (reflex $\angle B$) = ...°

4 **In the opposite figure :**

$A \in \overleftrightarrow{CB}$

, then m ($\angle DAE$) = ...°

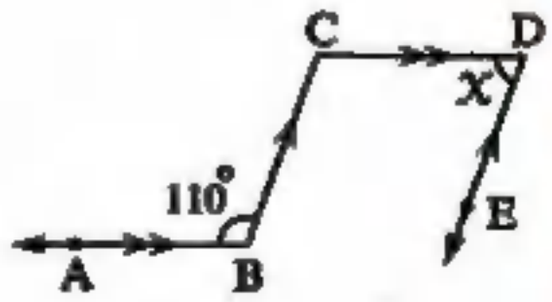


5 **In the opposite figure :**

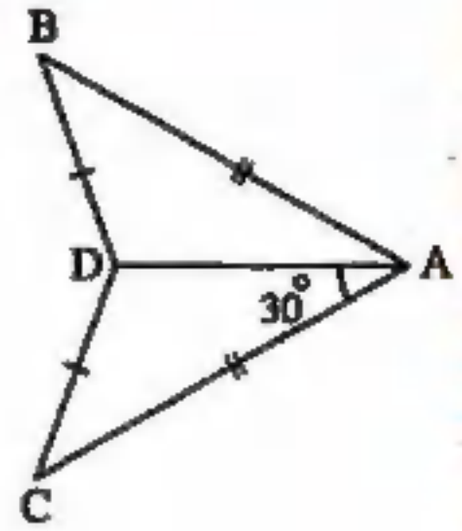
$\overline{CD} \parallel \overrightarrow{BA}$

, $\overrightarrow{DE} \parallel \overline{CB}$

, then x = ...°



3 **[a] In the opposite figure :**



$AB = AC$

, $BD = DC$

, $m(\angle CAD) = 30°$

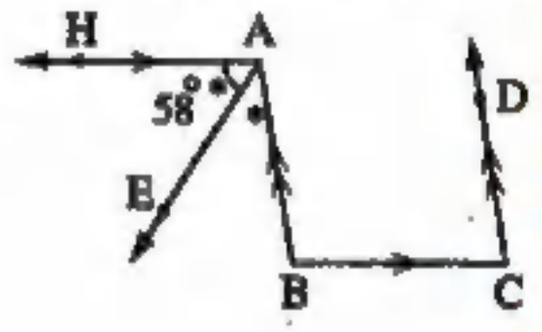
1 **Prove that :** $\Delta ABD \equiv \Delta ACD$

2 **Find :** $m(\angle CAB)$

[b] Using the ruler and the compasses , draw the angle ABC where $m(\angle ABC) = 110°$ and draw $\overrightarrow{BD}$ to bisect the angle. (Don't remove the arcs)

---

4 **[a] In the opposite figure :**

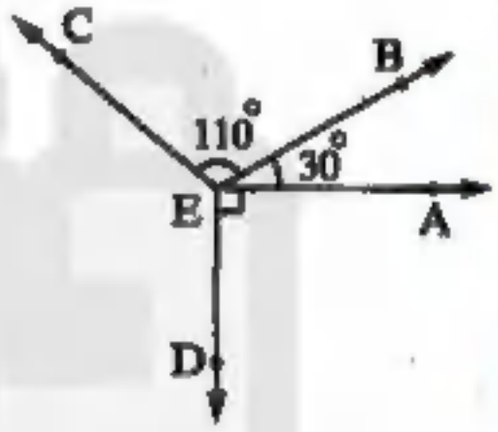


$\overrightarrow{CD} // \overrightarrow{BA}$, $\overrightarrow{CB} // \overrightarrow{AH}$

, $\overrightarrow{AE}$ bisects $\angle BAH$, $m(\angle EAH) = 58°$

Find : $m(\angle C)$

[b] In the opposite figure :



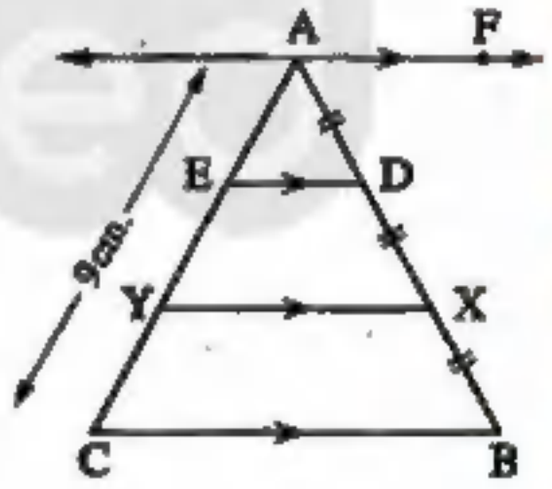
$m(\angle AEB) = 30°$, $m(\angle BEC) = 110°$

, $m(\angle AED) = 90°$

Find : $m(\angle DEC)$

---

5 **[a] In the opposite figure :**



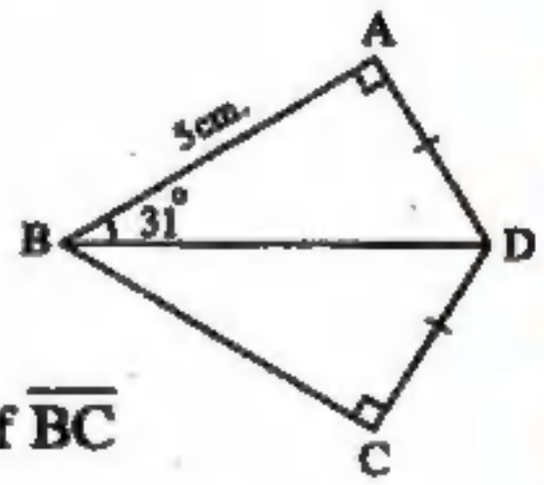
$\overleftrightarrow{AF} // \overline{ED} // \overline{YX} // \overline{CB}$

, $AD = DX = XB$

, $AC = 9$ cm.

Find : The length of $\overline{AY}$

[b] In the opposite figure :



$m(\angle A) = m(\angle C) = 90°$, $m(\angle ABD) = 31°$

, $AB = 5$ cm.

, $AD = CD$

1 **Prove that :** $\Delta ABD \equiv \Delta CBD$

2 **Find :** The length of $\overline{BC}$

3 **Find :** $m(\angle CBD)$

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Answer the following questions :

1 Choose the correct answer :

1 A square is of side length 7 cm. , then its perimeter = ... cm.

(a) 14 (b) 21 (c) 24 (d) 28

2 The circumference of the circle = ...

(a) 2π (b) $2\pi r$ (c) πr (d) πr^2

3 The sum of measures of the accumulative angles at a point equals .....°

(a) 360 (b) 180 (c) 603 (d) 150

4 If $L_1 // L_3$, $L_2 // L_3$, then .....

(a) $L_1 // L_2$ (b) $L_1 \perp L_2$ (c) $L_2 \perp L_3$ (d) $L_1 \perp L_3$

5 The measure of the supplement of the angle whose measure is 30° equals .....°

(a) 60 (b) 180 (c) 150 (d) 90

6 If $\angle X$ complements $\angle Y$ and $\angle X \equiv \angle Y$, then m ($\angle X$) = ...°

(a) 45 (b) 90 (c) 180 (d) 360

2 Complete :

1 Two triangles are congruent if two sides and ..... of one triangle are congruent to their corresponding parts of the other triangle.

2 If m ($\angle A$) = 105° , then m (reflex $\angle A$) = ...°

3 If $\Delta ABC \equiv \Delta XYZ$, then $\overline{AC} \equiv$ .....

4 If a straight line intersects two parallel lines , then each two corresponding angles are .....

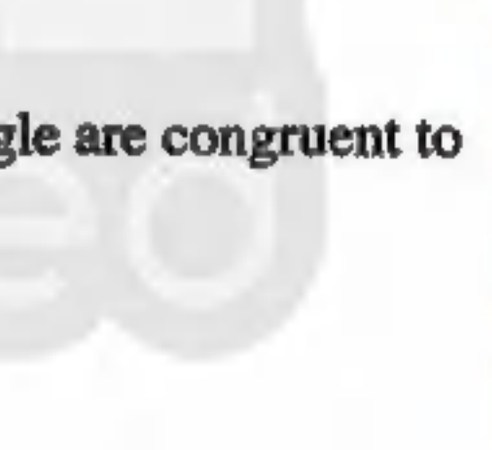
5 In ΔABC , if m ($\angle A$) = 50° , m ($\angle B$) = 40° , then m ($\angle C$) = ...°

3 [a] In the opposite figure :

m ($\angle AMB$) = 110° , m ($\angle AMD$) = 90°

, m ($\angle DMC$) = 40°

Find : m ($\angle BMC$) (With steps)



[b] Using the geometric tools , draw ∠ ABC whose measure is 90°
, then draw $\overrightarrow{BF}$ to bisect the angle. (Don't remove the arcs)

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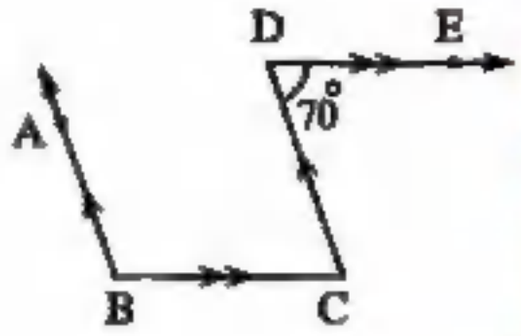
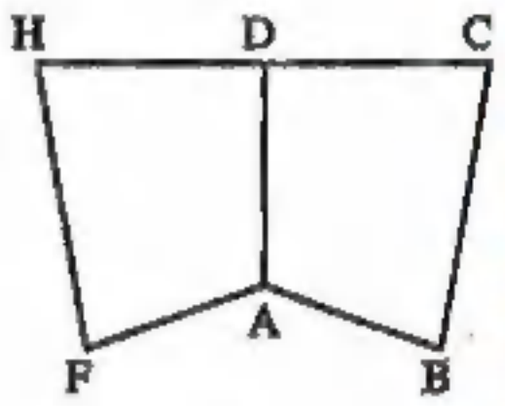
4 [a] In the opposite figure :



$\overrightarrow{DE}$ // $\overline{BC}$
, $\overline{DC}$ // $\overrightarrow{BA}$
, m (∠ D) = 70°
Find : m (∠ C) , m (∠ B) (Give reason)

[b] In the opposite figure :



The polygon ABCD ≡ the polygon AFHD
Complete :
1 AB = ... 2 BC = ...
3 m (∠ C) = m (∠ .....) 4 m (∠ F) = m (∠ .....)

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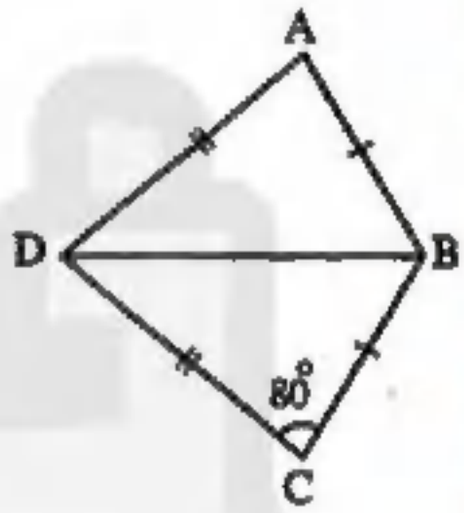
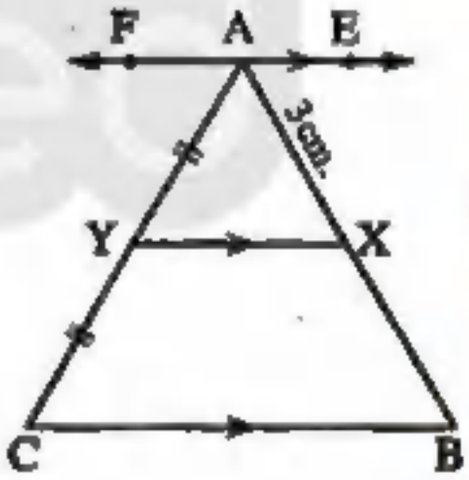
5 [a] In the opposite figure :



AB = BC
, AD = DC
, m (∠ C) = 80°
1 **Prove that :** Δ ABD ≡ Δ CBD
2 **Find :** m (∠ A)

[b] In the opposite figure :



$\overleftrightarrow{AF}$ // $\overline{XY}$ // $\overline{BC}$
, AY = YC
, AX = 3 cm.
Find : The length of $\overline{AB}$ (Give reason)